Stock: Herring in Gulf of Riga

**Assessment Quality Control Diagram 1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average F(3-7,u) | | | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | | | |
|  | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
| 1990 | 0.435 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 0.453 | 0.412 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 0.3565 | 0.2946 | 0.4205 | 0.4791 |  |  |  |  |  |  |  |  |  |  |  |
| 1994 | 0.3388 | 0.2708 | 0.3698 | 0.3919 | 0.3415 |  |  |  |  |  |  |  |  |  |  |
| 1995 | 0.3307 | 0.2618 | 0.3533 | 0.3608 | 0.2951 | 0.3010 |  |  |  |  |  |  |  |  |  |
| 1996 | 0.3200 | 0.2540 | 0.3364 | 0.3363 | 0.2569 | 0.2547 | 0.3239 |  |  |  |  |  |  |  |  |
| 1997 | 0.3158 | 0.2518 | 0.3310 | 0.3292 | 0.2590 | 0.2480 | 0.3127 | 0.3053 |  |  |  |  |  |  |  |
| 1998 | 0.3104 | 0.2447 | 0.3151 | 0.3165 | 0.2503 | 0.2359 | 0.3191 | 0.3159 | 0.3441 |  |  |  |  |  |  |
| 1999 | 0.3113 | 0.2450 | 0.3149 | 0.3172 | 0.2527 | 0.2387 | 0.3314 | 0.3411 | 0.4029 | 0.3170 |  |  |  |  |  |
| 2000 | 0.3075 | 0.2416 | 0.3086 | 0.3104 | 0.2482 | 0.2356 | 0.3268 | 0.3396 | 0.4105 | 0.3255 | 0.2566 |  |  |  |  |
| 2001 | 0.3588 | 0.273 | 0.363 | 0.3649 | 0.2912 | 0.2744 | 0.3797 | 0.4059 | 0.5078 | 0.4246 | 0.3668 | 0.3333 |  |  |  |
| 2002 | 0.3558 | 0.2689 | 0.3526 | 0.3552 | 0.2844 | 0.2691 | 0.3738 | 0.3994 | 0.4955 | 0.4176 | 0.3609 | 0.3246 | 0.2834 |  |  |
| 2003 | 0.3436 | 0.2566 | 0.3251 | 0.3286 | 0.2642 | 0.2532 | 0.3555 | 0.3808 | 0.4789 | 0.4116 | 0.3731 | 0.377 | 0.3752 | 0.297 |  |
| 2004 | 0.3498 | 0.2518 | 0.3081 | 0.3139 | 0.259 | 0.2465 | 0.3515 | 0.365 | 0.4489 | 0.385 | 0.3382 | 0.3389 | 0.3676 | 0.3291 | 0.3725 |

**Remarks: Average F (2-6, u)**

**No XSA was made in 1992**

**Stock: Herring in Gulf of Riga**

**Assessment Quality Control Diagram 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Recruitment (age 1) Unit: billions | | | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | | | |
|  | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| 1990 | 2807 | 303 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 2719 | 411 | 1100 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 3176 | 460 | 935 | 3069 | 4699 |  |  |  |  |  |  |  |  |  |  |
| 1994 | 3452 | 491 | 1080 | 3052 | 3324 | 3477 |  |  |  |  |  |  |  |  |  |
| 1995 | 3634 | 504 | 1140 | 3236 | 3843 | 4019 | 2697 |  |  |  |  |  |  |  |  |
| 1996 | 3700 | 512 | 1265 | 3448 | 4154 | 4838 | 3671 | 3620 |  |  |  |  |  |  |  |
| 1997 | 3727 | 513 | 1318 | 3517 | 4103 | 4746 | 3659 | 3824 | 4887 |  |  |  |  |  |  |
| 1998 | 3685 | 535 | 1321 | 3655 | 3822 | 4507 | 3669 | 3907 | 5132 |  |  |  |  |  |  |
| 1999 | 3672 | 535 | 1317 | 3613 | 3770 | 4464 | 3324 | 3297 | 4384 | 5771 |  |  |  |  |  |
| 2000 | 3700 | 538 | 1328 | 3624 | 3781 | 4449 | 3431 | 3135 | 4052 | 5865 | 2247 |  |  |  |  |
| 2001 | 3500 | 513 | 1230 | 3400 | 3593 | 4222 | 3246 | 2794 | 3595 | 5645 | 1841 | 3393 |  |  |  |
| 2002 | 3532 | 517 | 1241 | 3417 | 3610 | 4244 | 3259 | 2801 | 3735 | 5287 | 1838 | 3771 | 4182 |  |  |
| 2003 | 3639 | 529 | 1277 | 3495 | 3652 | 4305 | 3302 | 2803 | 3732 | 4889 | 1668 | 3108 | 3538 | 3522 |  |
| 2004 | 3639 | 539 | 1265 | 3500 | 3754 | 4328 | 3337 | 2964 | 3702 | 5043 | 1661 | 3079 | 3046 | 2980 | 6733 |

**Remarks: No XSA was made in 1992**

**Stock: Herring in Gulf of Riga**

**Assessment Quality Control Diagram 3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spawning stock biomass ('000 t) | | | | | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | | | | | |
|  | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| 1990 | 44.9 | 54.4 | 57.1 | 56.8 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 44.4 | 49.3 | 63.5 | 75.3 | 69.9 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 56.2 | 59.8 | 65.1 | 94.8 | 96.7 | 83.6 | 71.3 |  |  |  |  |  |  |  |  |  |  |
| 1994 | 59.6 | 68.1 | 68.6 | 86.6 | 94.9 | 108.8 | 101.9 | 93.1 |  |  |  |  |  |  |  |  |  |
| 1995 | 62.0 | 71.9 | 73.3 | 96.5 | 109.6 | 110.9 | 113.8 | 107.7 | 101.6 |  |  |  |  |  |  |  |  |
| 1996 | 63.6 | 75.5 | 78.2 | 104.4 | 125.2 | 136.2 | 135.3 | 145.4 | 150.2 | 125.6 |  |  |  |  |  |  |  |
| 1997 | 64.2 | 76.9 | 79.9 | 105.6 | 125.3 | 136.0 | 136.9 | 140.6 | 169.9 | 147.6 | 129.2 |  |  |  |  |  |  |
| 1998 | 64.3 | 76.0 | 81.8 | 94.9 | 121.3 | 132.1 | 136.4 | 138.4 | 161.4 | 143.0 | 141.4 | 135.6 |  |  |  |  |  |
| 1999 | 63.4 | 77.2 | 79.7 | 103.3 | 120.9 | 127.4 | 125.0 | 123.7 | 128.0 | 125.4 | 134.4 | 132.6 | 122.0 |  |  |  |  |
| 2000 | 64.0 | 78.1 | 80.5 | 104.1 | 211.4 | 128.9 | 124.7 | 120.1 | 125.0 | 111.5 | 124.2 | 131.7 | 134.4 | 125.2 |  |  |  |
| 2001 | 57.2 | 69.3 | 74.2 | 93.6 | 110.4 | 117.3 | 111.8 | 102.6 | 111.7 | 94.7 | 106.2 | 120 |  |  |  |  |  |
| 2002 | 57.7 | 70 | 75.2 | 94.6 | 111.5 | 118.3 | 112.7 | 104.6 | 110.3 | 92.7 | 108.0 | 124.2 | 132.6 |  |  |  |  |
| 2003 | 59.5 | 72.7 | 78.3 | 97.9 | 115 | 121.5 | 115.3 | 106.6 | 108 | 87.9 | 94.9 | 102 | 110 | 129 |  |  |  |
| 2004 | 59,4 | 72..3 | 79.0 | 99.7 | 116.2 | 123.6 | 118.2 | 109.2 | 112.1 | 91.1 | 98 | 100.4 | 97.8 | 124.2 | 108.7 |  |  |

Forecast. *Status quo* catch.

**Remarks:**  **No XSA was made in 1992**